

ABSTRACT

A high power amplifier has a first balun propagating a half of an input signal to an in-phase output terminal, and also propagating a fourth of the input signal to first and second opposite-phase output terminals, the signal propagated to the first and second opposite-phase output terminals lagging 180 degrees behind the signal propagated to the in-phase output terminal; first and second power amplifier circuits connected to the first and second opposite-phase output terminals of the first balun and having the same characteristics; a third power amplifier circuit connected to the in-phase output terminal of the first balun and having output power substantially twice as much as the output power of the first or second power amplifier circuit; and a second balun having first and second opposite-phase input terminals for receiving the outputs of the first and second power amplifier circuits, having an in-phase input terminal for receiving the output of the third power amplifier circuit, combining the outputs of the first, second and third power amplifier circuits, and propagating combined output.